

previous operation. The fluoroscope shows a small amount of barium caught in the duodenum as it passes from the stomach transduodenally to the jejunum. The patient, a rather tall, spare woman, has taken on twenty-three pounds of weight.

In the literature some nineteen methods are discussed for the relief of this condition. It is very significant that in the histories of forty-one cases presented by Kellogg and Kellogg twenty-two cases have been previously operated upon, eight gastro-enterostomies, two gall bladders drained, removed, two kidneys fixed. My patient had two previous operations, one kidney fixation, one gall bladder drainage and gastro-duodenostomy.

I might conclude that a widely dilated pylorus should suggest to the mind of the surgeon the possibility of obliterating the duodeno-jejunal angle by a duodeno-jejunostomy.

Kellog & Kellog, *Annals of Surgery*, May, 1921.

ACUTE SUPPURATIVE THYROIDITIS

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It was not until some time after the earlier writers had observed and recorded instances of thyroiditis, both purulent and non-purulent, that the difference between an inflammation of the normal thyroid and a goitre was made. Later a further advance was made when Kocher, in the latter half of the nineteenth century, stated that all inflammations of the gland were secondary to a focus elsewhere. Bacteriological proof of this was made a few years afterward.

While this condition is not rare it is sufficiently uncommon to merit the recording of cases, but one instance having come under observation in this clinic during the past several years. Indeed, the thyroid is one of the least susceptible glands of the body to infection.

Thyroiditis is an inflammation of the normal thyroid gland. It is secondary to a focus elsewhere in the body, this latter often being obscure and difficult to demonstrate.

Three possible routes of infection exist, that by contiguity from a pre-existing perithyroiditis, that by direct inoculation from the introduction of organisms on a needle or knife, and that by way of the blood stream. When the organisms have obtained a foothold in the gland their activities may result in either a non-purulent or progress to a purulent inflammation.

In the non-purulent stage the greatest reaction may be observed in either the supporting portion of the gland or in the epithelial elements, or the process may be generalized, both supporting and epithelial portions being equally involved. Where the process has gone on to suppuration, of course, all elements are affected, though not always to an equal extent, the stroma often proving the more resistant.

While thyroiditis may occur apparently spontaneously, it is rare. The more common manner of occurrence is during the course of or following an infectious condition elsewhere in the body, and during the period of convalescence.

The list of diseases which have been complicated by thyroid inflammation is a generous one, and includes those of the upper, middle and lower air-passages; inflammations of the gastro-intestinal tract; acute exanthemata, and general infections. From the infected gland have been isolated, in addition to the ordinary pyogenic bacteria, the pneumococcus, the typhoid bacillus and members of the colon group. Thyroiditis has been observed at all ages from the very young to the old, although the majority of cases occur after the second decade. Women are more frequently affected than men.

The amount of gland involved in the inflammatory process varies from a portion of one lobe to the entire gland, the greater number of cases recorded being unilobular. The early picture differs in no material feature from an inflammatory process of any glandular structure. Congestive changes are followed by, at first, proliferative changes in the epithelial elements, then by desquamation and destruction. The acinal contents become liquified, and the usual gathering of inflammatory elements takes place. There is generally a rich collection of leucocytes infiltrating the various structures within the involved area.

If the process be arrested at this point, resolution may follow promptly or more gradually in weakened subjects. If suppuration ensues, numerous abscess cavities occur which later coalesce to form a large area that may even involve the entire gland. Depending upon the rapidity of the process, which in turn is dependent upon the type and virulence of the causative organism and the resistance of the patient, the character of the pus varies within wide limits. In some instances it is thin and watery, in others thick and creamy. Its color is determined not only by the organism, but by the amount of hemorrhage which has taken place into the necrosed areas.

According to Lebert, suppuration occurs in 60 per cent of all cases of thyroiditis, and 25 per cent of all cases terminate fatally. Other writers and reviewers quote statistics to show that thyroiditis terminating in resolution is the more common.

In its early stages thyroiditis may be difficult to diagnose, and several days may elapse before the symptoms are sufficiently definite to point to the seat of trouble. Depending upon the condition of the patient and the activity of the invading organism, the onset may be gradual or, more often, sudden. As would be expected there is usually high fever and often a chill, prostration and weakness, loss of appetite with, not infrequently, gastro-intestinal disturbances.

Pain in the thyroid region is soon complained of. The pain may at first affect any portion of the neck above or below the level of the gland before becoming localized. The pain becomes more and more severe as the process develops, and sooner or later interferes with and is increased by swallowing.

Swelling of a portion of, or the entire gland, becomes manifest—early in some cases, delayed in others. With the development of the trouble the patient's head is apt to assume a certain posi-

tion, a sign noted by different observers. The head is flexed, as any attempt at extension causes pressure upon the gland between the muscles covering it and the vertebræ behind. Hoarseness from inflammation of the upper air-passage is not uncommon. Examination at this stage will show an enlarged, painful, tender gland of firm—even hard—consistence that gives the usual thyroid sign of movement with swallowing.

If the disease be arrested now, the gland may return to normal with a subsidence of symptoms. This return may be prompt or may be delayed over some weeks. Cases may subside for a period only to flare up later and progress to suppuration.

If the inflammatory process goes on to suppuration, there is usually an increase in the severity of the symptoms and physical signs. Prostration becomes more marked, the fever ranges higher and the blood pressure keeps pace.

Locally, the swelling loses its hard character, changes in form as the surrounding structures become edematous and the skin takes on an inflammatory reaction which may eventuate in necrosis and rupture of the abscess if surgical drainage be not instituted. The size of the swelling in thyroiditis will never become extreme while in infectious processes of a goitre—strumitis—the size is limited only by the size and character of the pre-existing condition.

In the pre-suppurative stage the treatment should be so directed as to relieve the symptoms.

If suppuration has developed, and it is not always readily detected, the abscess should be opened and drained. The question of diagnostic puncture is one which has its advocates as well as those who condemn it. Certainly, it is better to err towards too early rather than too long delayed incision. Unfortunately the immediate good result is not necessarily an indication of the final outcome, as these patients in many instances develop symptoms referable to subsequent thyroid disease. These sequelæ may be the result of either hyper or hypothyroidism.

Case, J. J., Disp. No. 83,894, Italian, laborer, age thirty-nine years, was admitted to the surgical service of Dr. Stanley Stillman. Patient complained of a swollen, stiff and painful neck of five days' duration. He states he had influenza a short time ago, returned to work before he was fully recovered, and the neck trouble developed soon afterwards. The onset was sudden, the neck being painful when patient awoke one morning.

Patient's family and past history is unimportant. He came from Italy eighteen years ago, and has done laborer's work in various regions since.

On admission, patient's temperature was 101° F., his pulse 120 per minute, and his respirations above 30 per minute. He complains of severe headache, and has a cough. His voice is hoarse.

At this time there was a painful, firm swelling conforming to the shape and position of the thyroid gland. To the left of the mid-line, and in front, there was an area of redness of the skin beneath which existed the greatest point of tenderness and probable fluctuation.

The patient was kept in bed for twenty-four hours with hot compresses to his neck. At the end of this period his neck was better, his temperature had dropped to 98.2°, and he seemed generally better. In spite of advice he left the hospital.

Four days later he returned to the hospital,

looking very ill and with a temperature of near 100° F., a pulse of 120 per minute. At this time the entire area of the thyroid was swollen, tender, the skin red, and the area of fluctuation had spread to include not only the isthmus region, but both lobes as well. Patient's leucocytes were 14,750 with 72 per cent polymorphonuclear cells.

He was given a general anesthetic, and pus withdrawn from the fluctuant area over the left lobe of the thyroid by means of a needle and syringe. An incision was carried down along the needle before withdrawing it. This incision was stretched with a curved clamp, and between one and two ounces of a thick, creamy pus obtained.

The cavity was then carefully explored with the finger, and was found to invade both lobes and the isthmus, there being apparently a thin wall of gland tissue lining the capsule, this surrounding in turn, more or less structureless, softened and broken down thyroid. Drainage tubes were inserted well up within both the right and the left lobes.

Smears from the pus showed many gram-positive, encapsulated diplococci, and a few cocci in short chains. Cultures yielded a growth of pneumococcus, type 1.

The patient made an uninterrupted recovery, the immediate result being good. He left the hospital ten days following the operation to return to the out-patient department for dressings. He returned twice, the last time being five days after discharge from the hospital. Since then he has been, unfortunately, lost sight of, and it will probably not be possible to complete our records in this case as to the ultimate result, whether or not disturbances will follow from an abnormal thyroid function.

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Make each hospital in a community a health center and a life extension institute for its neighborhood, advises the superintendent of a New York City hospital, who has faulted the institution which stands isolated and apart in its community. As health centers, he believes hospitals would render their utmost service to the community.

Louis J. Frank, superintendent of the Beth Israel Hospital, New York City, proposes the extension of hospital service and suggests a zone system as the most practicable means of bringing citizens and the hospital into closer touch. According to Superintendent Frank, physicians are as much in need of a broadened policy for the hospital, as the public is in need of the health service which hospitals could perform, if developed as health centers. Physicians frequently lose their connection with medical progress on the day of their graduation from college, says their critic. This is so because their professional relations with hospitals, dispensaries, and clinics are restricted, whereas if each hospital were made a health center all the physicians in the locality and their patients would be served by the hospital.

The patient might either remain at home, become an out-patient of the dispensary at the health center, or temporarily enter the hospital for treatment, remaining at all times under the direction of his own physician. The facilities of the hospital-health-center, which now benefit none but hospital patients, would under the zone system be extended to serve the sick in homes of the neighborhood.